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Minimally invasive methods of diagnosis of bronchitis severity in children

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Abstract

The development of new minimally invasive differential diagnostic and prognostic criteria of severity of the various forms of bronchitis in children. Total 127 hospitalized children aged 5 to 14 years with various forms of bronchitis were examined. 78 of them suffering from recurrent bronchitis were attributed to group 1; and 49 children with acute bronchitis were attributed to group 2. The control group consisted of 35 conditionally healthy children. A special complex study included the determination of the indicators of oxidative stress using the model of oral neutrophils and the oral colonization resistance indicators. It was revealed that the children had significantly lower colonization index and anti-adhesive saliva activity than the control group, while the lowest value were observed in group 1. Children with acute bronchitis had increase in value of the spontaneous and induced luminol chemiluminescence as compared to control, while in case of recurrent bronchitis these values were below the reference value. Indicators of the induced luminol chemiluminescence in healthy children reached their maximum, in group 2 they tended to decrease, but decreased to minimum values in group 1. The use of minimally invasive diagnostic methods shows promise in pediatric pulmonology. Subject to severe defects of the mucosal protection system, the patients with recurrent bronchitis are extremely "vulnerable" to repeated bacterial infections (diseases). This dictates the need to conduct the targeted preventive and rehabilitation measures in this group.

Keywords

Bronchites, Children, Minimally invasive diagnostics